AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A thin film deposition apparatus having a reaction chamber for forming a thin film on a plurality of substrates rested on a susceptor, the apparatus comprising:

a gas supply means for supplying a plurality of gases to the inside of the reaction chamber from the outside, the gases including a reaction gas;

a gas distribution means for distributing and spraying the gases supplied from the gas supply means so as to conform to the purpose of a process;

a gas retaining means ~~having a plurality of reaction cells,~~ for partitionally accommodating and concurrently retaining the gases distributed from the gas distribution means, the gas retaining means comprising:

an upper plate having a bottom face; and

a plurality of partition walls protruding from the bottom face and installed at regular intervals below the bottom face, such that the partition walls define therebetween a plurality of reaction cells below the upper plate, ~~wherein an upper space of the susceptor is divided bya plurality of partition walls~~ wherein the partition walls are configured so as to increasingly broaden the width of the reaction cells from the inside to the outside of the gas retaining means ~~for partitionally accommodating and concurrently retaining~~ and to partitionally accommodate and concurrently retain the respective gases distributed from the gas distribution means;

a rotation driving means for rotating selectively one of the gas retaining means and the susceptor such that the gases concurrently retained in the respective reaction cells are exposed to the substrates in sequence; and

a gas exhaust means for pumping the gases retained by the gas retaining means to the outside of the reaction chamber.

2. (Previously Presented) The apparatus of claim 1, wherein the gas retaining means is connected at its central portion with the lower end of the gas distribution means, and the reaction cell being integrally rotated together with the gas distribution means.

3. (Previously Presented) The apparatus of claim 1, wherein the gas supply means supplies at least two or more reaction gases and a purge gas.

4-5. (Canceled)

6. (Currently Amended) The apparatus of ~~claim 5,~~ claim 1, wherein the upper plate has the form of a circular plate, and the respective partition walls are installed in a radial direction.

7. (Withdrawn - Currently Amended) The apparatus of ~~claim 5,~~ claim 1, wherein the upper plate has the form of a circular plate, and the respective partition walls are installed in a spiral form.

8. (Currently Amended) The apparatus of ~~claim 5,~~ claim 1, wherein among the reaction cells, a reaction cell requiring an extension of gas retaining time is further provided at its periphery with an outer peripheral wall connecting the end portions of the partition walls.

9. (Currently Amended) The apparatus of ~~claim 5,~~ claim 1, wherein the partition wall is further provided, at both lower end sides thereof, with an extension plate extended in parallel to the susceptor, so that gas mixing between neighboring reaction cells is restricted.

10. (Original) The apparatus of claim 9, wherein the spacing between the extension plate and the substrate is maintained below 3mm while not contacting each other.

11. (Previously Presented) The apparatus of claim 1, wherein the rotation driving means has a rotation frequency from 30 to 180 rpm.

12. (Currently Amended) The apparatus of ~~claim 5,~~ claim 1, wherein the gas distribution means further comprises:

a fixing means for fixing the gas retaining means;

a distribution main body inserted into the central portion of the upper plate and closely contacting the respective partition walls;

a gas inlet ports formed in the distribution main body such that gases supplied from the gas supply means are individually introduced;

a distribution chamber fluid-communicated with the gas inlet ports and having a desired space formed therein for partitionally accommodating the respective gases; and

a plurality of lateral spray ports formed in the later face of the distribution main body such that the gases accommodated in the distribution chamber are sprayed to the lateral faces of the respective reaction cells.

13. (Original) The apparatus of claim 12, wherein, among the distribution chambers, a distribution chamber accommodating a purge gas is further provided with a downward spray port formed in the bottom face of the distribution main body, along with the lateral spray port, such that the purge gas can be sprayed vertical-downwardly.

14. (Previously Presented) The apparatus of claim 12, wherein the fixing means further comprises:

a plurality connection grooves formed in the distribution main body; and

a connection protrusion formed in on end portion of the respective partition walls so as to be inserted and connected into the connection groove.

15. (Original) The apparatus of claim 12, wherein among the distribution chamber, distribution chambers, to which identical gases are supplied, are fluid-communicated with each other.

16. (Withdrawn – Previously Presented) The apparatus of claim 1, wherein the gas retaining means further comprises:

a shower head divided in plural such that gases distributed from the gas distribution means are sprayed vertical-downwardly through a plurality of spray ports formed in the bottom face thereof; and

a plurality of partition walls formed at regular intervals in the bottom face of the shower head such that a plurality of reaction cells are formed correspondingly to the respective shower heads.

17. (Withdrawn – Previously Presented) The apparatus of claim 16, wherein the gas distribution means further comprises:

a fixing means for fixing the gas retaining means;

a distribution main body having the form of a circular plate and inserted into the central portion of the shower head;

a plurality of gas inlet ports formed in the distribution main body such that gases supplied from the gas supply means are individually introduced;

a distribution chamber fluid-communicated with the gas inlet ports and having a desired space for partitionally accommodating the respective gases; and

a plurality of lateral spray ports formed in the later face of the distribution main body such that the gases accommodated in the distribution chamber are sprayed to partitioned spaces of the inside of the shower head.

18. (Previously Presented) The apparatus of claim 1, wherein a restriction plate is installed in such a way as to be protruded along the inner peripheral face of the reaction chamber so as to be closely contacted with the upper periphery of the susceptor when it ascends, and the gas exhaust means is installed such that gas in a space between the inner peripheral face of the upper space of the reaction chamber and the outer periphery of the reaction cell can be pumped through an exhaust port, the reaction chamber being restricted by the ascending susceptor.

19. (Previously Presented) The apparatus of claim 18, wherein the gas exhaust means further comprises:

a plurality of pumping cell partitioned to no more than the peripheral length of the reaction cell; and

an exhaust pump for pumping gases through an exhaust port connected with the respective pumping cells.

20. (Previously Presented) The apparatus of claim 19, wherein the pumping cell further comprises:

a primary exhaust passageway formed in a space above the restriction plate;

a separation plate having a plurality of through-holes formed above the primary exhaust passageway; and

a secondary exhaust passageway formed in a space above the separation plate and connected with the exhaust port.

21. (Previously Presented) The apparatus of claim 1, further comprising a radical generating means for radicalizing one or more reaction gas among the gases supplied from the gas supply means.

22. (Previously Presented) The apparatus of claim 1, wherein among the reaction cells, at least one reaction cell, to which a reaction gas is supplied, is further provided with a plasma excitation means for plasma-exciting a reaction gas inside the reaction cell, the plasma excitation means being electrically connected with an external RF power application device at the face thereof corresponding to the upper portion of the substrate.

23. (Withdrawn – Currently Amended) A thin film deposition method, in which a thin film is formed on a plurality of substrates rested on a susceptor inside of a reaction chamber, the method comprising the steps of:

rotating a plurality of reaction cells above the susceptor, wherein an upper space of the ~~susceptor~~ reaction chamber is divided by a plurality of partition walls to form the reaction cells, the partition walls protruding from a bottom face of an upper plate and partitioned at regular intervals below the upper plate, the partition walls defining therebetween the reaction cells, the partition walls being configured to increasingly broaden the width of the reaction cells from the inside to the outside of the gas retaining means, the reaction cells partitionally accommodating and concurrently retaining a plurality of gases supplied to the inside of the reaction chamber;

continuously supplying the plurality of gases including a reaction gas to the inside of the reaction chamber from the outside;

distributing and spraying the supplied gases to the reaction cell;

forming a thin film on the substrate while the gases retained in the rotating reaction cell are exposed to the respective substrate in sequence; and

pumping and exhausting excessive gases having been exposed to the substrate to the outside.

24. (Withdrawn – Currently Amended) A thin film deposition method, in which a thin film is formed on a plurality of substrates rested on a susceptor inside of a reaction chamber, the method comprising the steps of:

rotating a plurality of reaction cells above the susceptor, wherein an upper space of the ~~susceptor~~ reaction chamber is divided by a plurality of partition walls to form the reaction cells, the partition walls protruding from a bottom face of an upper plate and partitioned at regular intervals below the upper plate, the partition walls defining therebetween the reaction cells, the partition walls being configured to increasingly broaden the width of the reaction cells from the inside to the outside of the gas retaining means, the reaction cells partitionally accommodating and concurrently retaining a plurality of gases supplied to the inside of the reaction chamber;

continuously supplying at least two or more reaction gases and a purge gas to the inside of the reaction chamber from the outside;

distributing and spraying the supplied gases to the reaction cell, in the order of the first reaction gas, the purge gas, the second reaction gas, the purge gas, with respect to the reaction cells;

forming an atomic layer on the substrate while the gases retained in the rotating reaction cell are exposed to the respective substrate; and

pumping and exhausting excessive gases having been exposed to the substrate to the outside.

25. (Withdrawn – Currently Amended) A thin film deposition method, in which a thin film is formed on a plurality of substrates rested on a susceptor inside of a reaction chamber, the method comprising the steps of:

rotating a susceptor below a plurality of reaction cells, wherein an upper space of the ~~susceptor~~ reaction chamber is divided by a plurality of partition walls to form the reaction cells, the partition walls protruding from a bottom face of an upper plate and partitioned at regular intervals below the upper plate, the partition walls defining therebetween the reaction cells, the partition walls being configured to increasingly broaden the width of the reaction cells from the inside to the outside of the gas retaining means, the

reaction cells being configured to individually accommodate and concurrently retain gases supplied to the inside of the reaction chamber;

continuously supplying a plurality of gases including a reaction gas to the inside of the reaction chamber from the outside;

distributing and spraying the supplied gases to the reaction cell;

forming a thin film on the substrate while the respective substrates are exposed to the gases retained in the reaction cell in sequence; and

pumping and exhausting excessive gases having been exposed to the substrate to the outside.

26. (Withdrawn – Previously Presented) The method of claim 23, wherein the distributing and spraying step includes a step of supplying the respective gases from the center of the susceptor in a radial direction in a layered behavior fashion.

27. (Withdrawn – Previously Presented) The method of claim 23, wherein the distributing and spraying step includes a step of supplying the respective gases vertical-downwardly towards the susceptor in a shower head fashion.

28. (Withdrawn – Previously Presented) The method of claim 23, further comprising a step of radicalizing at least one reaction gas among the gases supplied to the inside of the reaction chamber.

29. (Withdrawn – Previously Presented) The method of claim 23, further comprising a step of plasma-exciting at least one reaction gas among the gases retained the reaction cell.